

Application No. 09/445,174
Filing Date: April 24, 2000
Docket No. 294-78
Page 2 of 17

In the claims:

Please amend claims 15, 20-24, 38, 46 and 55 as follows:

(All the pending claims, 15-55 are reproduced for the Examiner's convenience)

15. (Amended) A diagnostic test kit for detecting the presence of or predisposition for breast cancer, wherein a means is provided for detecting a deletion of a stretch of nucleotides from a BRCA1 gene in a sample, wherein said deletion comprises at least a major part of exon 13, at least a major part of exon 22, or both.
16. A diagnostic test kit according to claim 15, wherein the means comprises at least one probe for hybridization.
17. A diagnostic test kit according to claim 15, wherein the means comprises the necessary elements for Southern blotting.
18. A diagnostic test kit according to claim 16, wherein the probe comprises a sequence complementary to sequences on both sides of the deletion in the BRCA1 gene.
19. A diagnostic test kit according to claim 17, wherein the necessary elements for Southern blotting comprises a probe, the probe comprising a sequence complementary to sequences on both sides of the deletion in the BRCA1 gene.

Application No. 09/445,174
Filing Date: April 24, 2000
Docket No. 294-78
Page 3 of 17

20. (Amended)) A diagnostic test kit according to claim 15, wherein the deletion comprises all of exon 13, all of exon 22, or all of both exon 13 and exon 22 of the BRCA1 gene.
21. (Amended) A diagnostic test kit according to claim 16, wherein the deletion comprises all of exon 13, all of exon 22, or all of both exon 13 and exon 22 of the BRCA1 gene.
22. (Amended) A diagnostic test kit according to claim 17, wherein the deletion comprises all of exon 13, all of exon 22, or all of both exon 13 and exon 22 of the BRCA1 gene.
23. (Amended) A diagnostic test kit according to claim 18, wherein the deletion comprises all of exon 13, all of exon 22, or all of both exon 13 and exon 22 of the BRCA1 gene.
24. (Amended) A diagnostic test kit according to claim 19, wherein the deletion comprises all of exon 13, all of exon 22, or all of both exon 13 and exon 22 of the BRCA1 gene.
25. A diagnostic test kit according to claim 15, wherein the deletion comprises a frame shift and/or a termination codon.
26. A diagnostic test kit according to claim 16, wherein the deletion comprises a frame shift and/or a termination codon.

Application No. 09/445,174
Filing Date: April 24, 2000
Docket No. 294-78
Page 4 of 17

27. A diagnostic test kit according to claim 17, wherein the deletion comprises a frame shift and/or a termination codon.
28. A diagnostic test kit according to claim 18, wherein the deletion comprises a frame shift and/or a termination codon.
29. A diagnostic test kit according to claim 19, wherein the deletion comprises a frame shift and/or a termination codon.
30. A diagnostic test kit according to claim 20, wherein the deletion comprises a frame shift and/or a termination codon.
31. A diagnostic test kit according to claim 15, wherein the deletion comprises a deletion of a stretch of nucleotides between two ALU-elements.
32. A diagnostic test kit according to claim 16, wherein the deletion comprises a deletion of a stretch of nucleotides between two ALU-elements.
33. A diagnostic test kit according to claim 17, wherein the deletion comprises a deletion of a stretch of nucleotides between two ALU-elements.
34. A diagnostic test kit according to claim 18, wherein the deletion comprises a deletion of a stretch of nucleotides between two ALU-elements.
35. A diagnostic test kit according to claim 19, wherein the deletion comprises a deletion of a stretch of nucleotides between two ALU-elements.

Application No. 09/445,174
Filing Date: April 24, 2000
Docket No. 294-78
Page 5 of 17

36. A diagnostic test kit according to claim 20, wherein the deletion comprises a deletion of a stretch of nucleotides between two ALU-elements.
37. A diagnostic test kit according to claim 25, wherein the deletion comprises a deletion of a stretch of nucleotides between two ALU-elements.
38. (Amended) A probe for use in a diagnostic test kit for detecting the presence of or predisposition for breast cancer, wherein a means is provided for detecting a deletion of a stretch of nucleotides from a BRCA1 gene in a sample, and wherein said deletion comprises at least a major part of exon 13, at least a major part of exon 22, or both; said probe comprising a nucleotide sequence which is a fusion of two ALU elements of the BRCA1 gene.
39. A probe for use in a diagnostic test kit according to claim 38, wherein the means comprises at least one probe for hybridization, the probe comprising a nucleotide sequence which is a fusion of two ALU elements of the BRCA1 gene.
40. A probe for use in a diagnostic test kit according to claim 38, wherein the means comprises the necessary elements for Southern blotting, comprising a nucleotide sequence which is a fusion of two ALU elements of the BRCA1 gene.
41. A probe for use in a diagnostic test kit according to claim 18, comprising a nucleotide sequence which is a fusion of two ALU elements of the BRCA1 gene.

Application No. 09/445,174
Filing Date: April 24, 2000
Docket No. 294-78
Page 6 of 17

42. A probe for use in a diagnostic test kit according to claim 19 comprising a nucleotide sequence which is a fusion of two A₁U elements of the BRCA1 gene.
43. A probe for use in a diagnostic test kit according to claim 20 comprising a nucleotide sequence which is a fusion of two A₁U elements of the BRCA1 gene.
44. A probe for use in a diagnostic test kit according to claim 25 comprising a nucleotide sequence which is a fusion of two A₁U elements of the BRCA1 gene.
45. A probe for use in a diagnostic test kit according to claim 31 comprising a nucleotide sequence which is a fusion of two A₁U elements of the BRCA1 gene.
46. (Amended) A probe for use in a diagnostic test kit according to claim 15, wherein said deletion comprises at least a major part of exon 13, at least a major part of exon 22, or both, and wherein the probe comprises a fusion product of two sequences adjacent to the site of a deletion of a stretch of nucleotides.
47. A probe for use in a diagnostic test kit according to claim 16, which is a fusion product of two sequences adjacent to the site of a deletion of a stretch of nucleotides.
48. A probe for use in a diagnostic test kit according to claim 17, which is a fusion product of two sequences adjacent to the site of a deletion of a stretch of nucleotides.
49. A probe for use in a diagnostic test kit according to claim 18, which is a fusion product of two sequences adjacent to the site of a deletion of a stretch of nucleotides.

Application No. 09/445,174

Filing Date: April 24, 2000

Docket No. 294-78

Page 7 of 17

50. A probe for use in a diagnostic test kit according to claim 19, which is a fusion product of two sequences adjacent to the site of a deletion of a stretch of nucleotides.
51. A probe for use in a diagnostic test kit according to claim 20, which is a fusion product of two sequences adjacent to the site of a deletion of a stretch of nucleotides.
52. A probe for use in a diagnostic test kit according to claim 25, which is a fusion product of two sequences adjacent to the site of a deletion of a stretch of nucleotides.
53. A probe for use in a diagnostic test kit according to claim 31, which is a fusion product of two sequences adjacent to the site of a deletion of a stretch of nucleotides.
54. A probe for use in a diagnostic test kit according to claim 38, which is a fusion product of two sequences adjacent to the site of a deletion of a stretch of nucleotides.
55. (Amended) A method of determining the presence in a sample of a nucleic acid derived from a BRCA1 gene having a deletion of a stretch of nucleotides, comprising contacting said sample with at least one probe which alone or together with a second means for detecting said deletion of a stretch of nucleotides from a BRCA1 gene, distinguishes between BRCA1 genes having said deletion and BRCA1 genes not having said deletion, allowing hybridization between said probe and said nucleic acids to form a hybridization product and identifying the hybridization product, wherein said deletion comprises at least a major part of exon 13, at least a major part of exon 22, or both.